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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,439	03/24/2006	Dong Seok Jeong	06-216	9233
34704 7590 04/03/2009 BACHMAN & LAPOINTE, P.C. 900 CHAPEL STREET SUITE 1201 NEW HAVEN, CT 06510				
EXAMINER				
DAZENSKI, MARC A				
ART UNIT		PAPER NUMBER		
2621				
MAIL DATE		DELIVERY MODE		
04/03/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/573,439

**Applicant(s)**

JEONG ET AL.

**Examiner**

MARC DAZENSKI

**Art Unit**

2621

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2006 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-85/86)
- Paper No(s)/Mail Date 3-24-2006
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 3 and 5** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. "Y picture" is not an accepted term of art, nor is it properly defined in the specification. The examiner is treating this to mean "Y or luminance value."

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1 and 3-5** are rejected under 35 U.S.C. 102(e) as being anticipated by Suh (US Patent 7,257,261), hereinafter referred to as Suh.

Regarding **claim 1**, Suh discloses an apparatus and method for generating thumbnail images. Further, Suh discloses an apparatus for generating thumbnail images wherein the images inputted to the apparatus are I pictures of an MPEG encoded video stream, which reads on the claimed, "an apparatus for extracting representative still images from Moving Picture Experts Group (MPEG) video," as disclosed at column 4, lines 31-33 and exhibited in figure 1; the apparatus comprising:

DC coefficient extractors (1) and (3), histogram extractors (2) and (4), and histogram comparator (5) for extracting the DC coefficients from adjacent I-frames, extracting the histograms from those I-frames, and then comparing the histograms with an error (E) and error threshold value (E\_Thr), which reads on the claimed, "a video curve generation unit for calculating distances between adjacent frames of all intra frames of input video and generating a video curve that is a cumulative curve of the distances," as disclosed at column 4, lines 10-35;

the apparatus for generating thumbnail images shows an error representing the histogram error between the DC images of I-pictures, with four scenes (S1) through (S4) are exemplified, which reads on the claimed, "a video curve division unit for dividing the video curve into a certain number of segments," as disclosed at column 5, lines 42-49 and exhibited in figure 2 (wherein because the video is divided into scenes S1 through S4, the apparatus must also comprise means to divide the video curve into a certain number of segments); and,

thumbnail image output unit (8) which selects and outputs the DC images as the thumbnail images on the basis of the blank test result, which reads on the claimed, "a

still image selection unit for selecting video images corresponding to certain points of the divided video curve as representative still images; and a video output unit for outputting the still images selected by the still image generation unit," as disclosed at column 4, lines 40-42.

Regarding **claim 3**, Suh discloses everything claimed as applied above (see claim 1). Further, Suh discloses the images inputted to the apparatus for generating the thumbnail images are I pictures, and the extractors (1), (2), (3), and (4) all act on either a current or previous I picture, which reads on the claimed, "an intra frame selection unit for selecting an intra frame from the input video," as disclosed at column 4, lines 10-35;

DC coefficient extractors (1) and (3) which extract DC images from current and previous I pictures, which reads on the claimed, "at least one Y picture selection unit for selecting only Direct Current (DC) coefficients from Discrete Cosine Transform (DCT) coefficients of a Y picture on the selected intra frame," as disclosed at column 1, lines 34-41; column 4, lines 10-20; and column 6, lines 40-45;

DC histogram extractors (2) and (4) which extractor histograms from a current and previous I picture, which reads on the claimed, "at least one cumulative DC histogram generation unit for extracting a cumulative histogram of the DC coefficients," as disclosed at column 4, lines 10-30;

histogram comparator (5) for comparing histograms and outputting an output error (E) as well as stabilization section decider (6) for deciding a stabilization section by comparing the error (E) with a threshold value ( $E_{Thr}$ ), wherein the histogram error (E) between the input DC images of the I pictures is calculated, and when the error (E) is

compared to value (E\_Thr), it decides if it implies the start of a new scene section and generates a thumbnail image accordingly, which reads on the claimed, "at least one frame distance generation unit for calculating a maximum distance between cumulative histograms of adjacent intra frames and determining the maximum distance to be a distance between two adjacent frames; and a cumulative frame distance histogram generation unit for acquiring the video curve, that is, a cumulative curve, from the distance between the adjacent frames of the selected intra frames when the distance between the adjacent frames is calculated through the Y picture selection unit, the cumulative DC histogram generation unit and the frame distance generation unit," as disclosed at column 4, lines 20-26; column 7, line 53 through column 8, line 22; as well as exhibited in figures 2 and 5.

Regarding **claim 4**, the examiner maintains the claim is merely the corresponding method to the apparatus of claim 1, and therefore the limitations of the claim are rejected in view of the explanation set forth in claim 1 above.

Regarding **claim 5**, Suh discloses everything claimed as applied above (see claim 4). Further, the examiner maintains the limitations of the claim are merely the corresponding method to the apparatus of claim 3, and therefore the limitations of the claim are rejected in view of the explanation set forth in claim 3 above.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Suh (US Patent 7,257,261), hereinafter referred to as Suh, in view of Jeannin et al (US Patent 7,333,712), hereinafter referred to as Jeannin.

Regarding **claim 2**, Suh discloses everything claimed as applied above (see claim 1). However, Suh fails to disclose further comprising a user requirement input unit for inputting user requirement to divide the video curve into a certain number of segments. The examiner maintains that it was well known in the art to include the missing limitations, as taught by Jeannin.

In a similar field of endeavor, Jeannin discloses a visual summary for scanning forwards and backwards in video content. Further, Jeannin discloses in lieu of automatic selection of keyframes, the user designates a plurality of frames from a video source as keyframes, which reads on the claimed, "further comprising a user requirement input unit for inputting user requirement to divide the video curve into a certain number of segments," as disclosed at column 5, lines 3-19.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the apparatus and method for generating thumbnail images of Suh to include in lieu of automatic selection of keyframes, the user designates a plurality of frames from a video

source as keyframes, as taught by Jeannin, for the purpose of reducing the likelihood of the apparatus choosing insignificant or unnecessary keyframes.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McGee et al (US Patent 6,766,098) discloses a method and apparatus for detecting fast motion scenes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC DAZENSKI whose telephone number is (571)270-5577. The examiner can normally be reached on M-F, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571)272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/  
Supervisory Patent Examiner, Art Unit 2621

/MARC DAZENSKI/  
Examiner, Art Unit 2621